

METHOD AND APPARATUS TO COMPENSATE AM-PM DELAY MISMATCH IN ENVELOPE RESTORATION TRANSMITTER

ABSTRACT OF THE DISCLOSURE

An RF transceiver includes an Envelope Restoration (ER) transmitter (TX) and a receiver (RX). A method includes providing the TX with a programmable delay element in at least one of an AM path and a PM path; making an RF connection between an output of the TX and an input of the RX; and when receiving a signal through the RF connection, determining a delay value for use in programming the programmable delay element. The method includes measuring an effect on a parameter of a delay mismatch between the AM path and the PM path for use in determining the delay value. Adjacent Channel Leakage Ratio (ACLR); Own-Channel Power (OCP) or Bit Error Ratio (BER) may be measured in this regard. When measuring ACLR, delay is adjusted to minimize ACLR; when measuring OCP, delay is adjusted to maximize OCP; and when measuring BER, delay is adjusted to minimize BER.